US Joint Forces Command
C4ISR Overview
for
USMC
Command Element Advocate Board
3 December 2003

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Director, Joint Requirements
and Integration
United States Joint Forces Comman

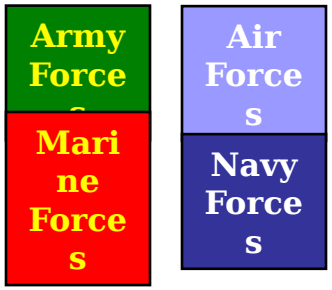
USJFCOM MISSION

USJFCOM maximizes the Nation's future and present military capabilities by leading the transformation of joint forces, through *joint concept development and experimentation*, identifying *joint requirements*, advancing *interoperability*, conducting *joint training*, and *providing ready continental U.S.-based forces* and capabilities – all to support the Combatant Commands

Interoperability impacts integration, training, force provision and transformation of our forces

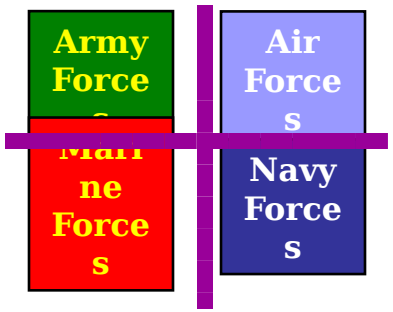
TRANSFORMING THE JOINT FORCE

De-conflict Service Forces



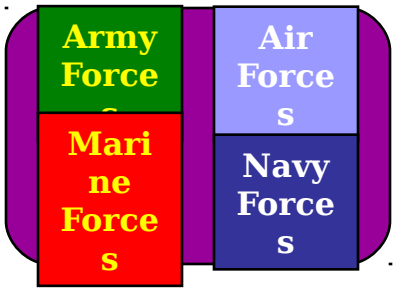
Services Deconflicting

Stitch Service Seams



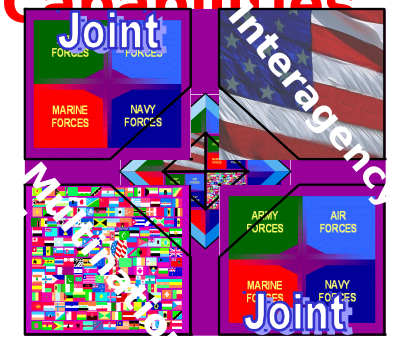
Services Coordinating

Integration of Service Capabilities



Services Integrating

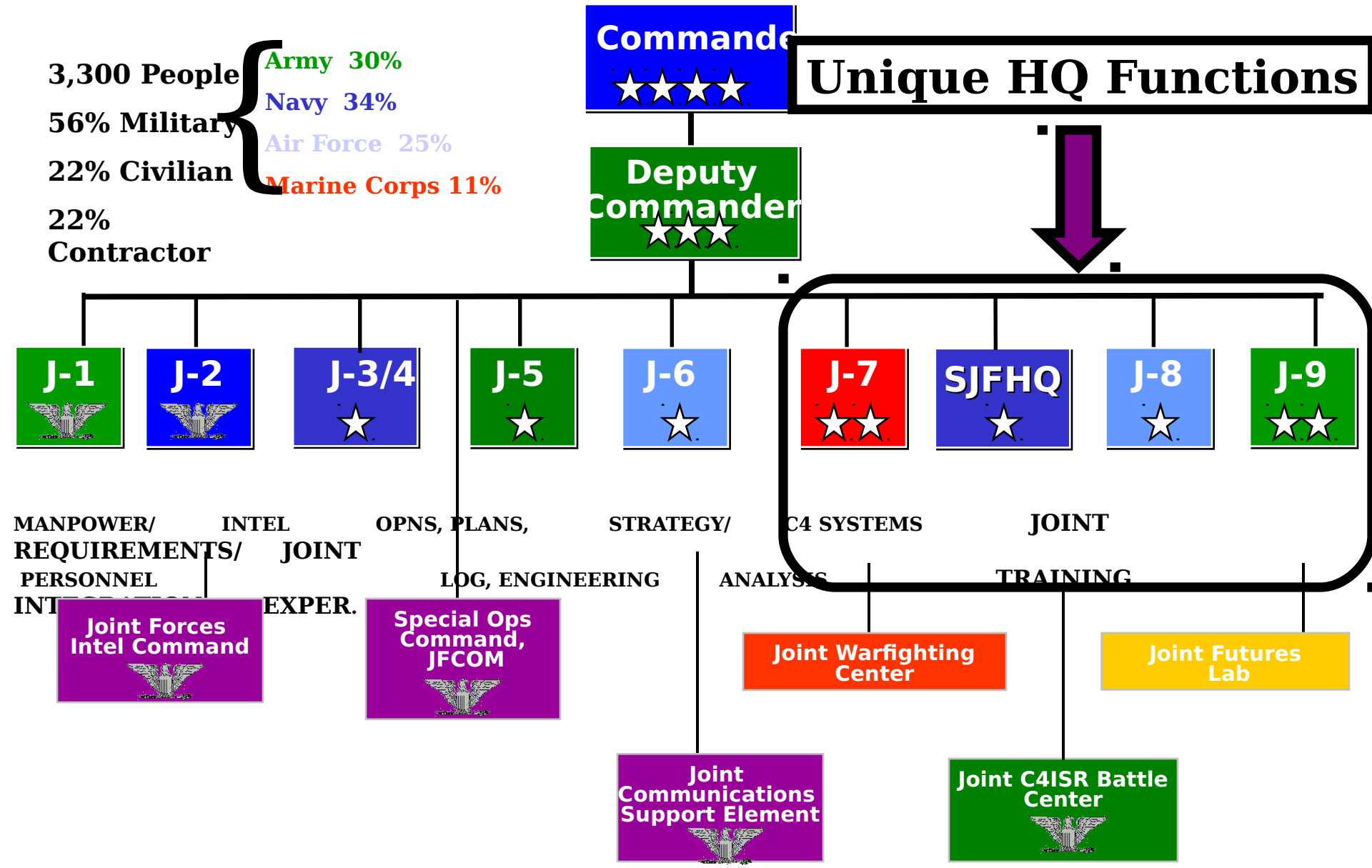
Full Integration of Service, Interagency, and Multinational Capabilities



A Full Spectrum capabilities-

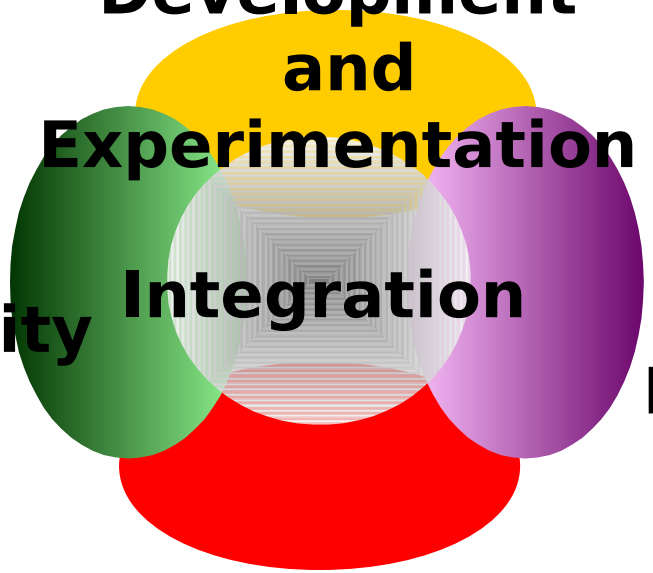
The Future is our "AOR"

Headquarters Organization



JFCOM's TRANSFORMATION ENGINES

Building tomorrow's joint force today



Trained and Ready Forces today are the foundation for transformation for tomorrow

Integrating all enterprises to create coherent joint and combined capabilities

MANAGEMENT INITIATIVE DECISION 912
(MID 912) January 2003

"Expanded USJFCOM roles and responsibilities for oversight and direction of Joint Battle Management Command and Control Capabilities"

MANAGEMENT INITIATIVE DECISION 912

HIGHLIGHTS

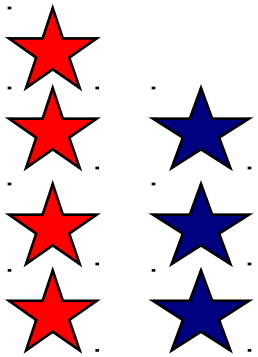
Expands USJFCOM responsibility for:

- **Strengthening Department's fielding of Joint Battle Management Command and Control (JBMC2) capabilities**
- **Leading Combatant Commanders in development of joint doctrine, concepts, mission/capability requirements for Joint BMC2**
- **Coordinating JBMC2 capabilities for joint integration and interoperability with the Joint Requirements Oversight Council (JROC)**
- **Direct oversight and directive authorities**

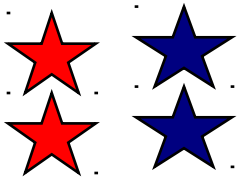
ADDITIONAL JBMC2 TASKS

- **Operational through tactical level integration of the following joint capabilities:**
  - **Common operational and tactical pictures.**
  - **Combat identification.**
  - **Situational awareness.**
  - **Adaptive mission planning and rehearsal.**
  - **Interoperable joint fires, maneuver, and intelligence.**

MID-912 SUPPORTS DEPARTMENT OF DEFENSE PRIORITIES



- Successfully Pursue the Global War on Terrorism
- Strengthen Joint Warfighting Capabilities
- Transform the Joint Force
- Optimize Intelligence Capabilities
- Counter the Proliferation of WMD
- Improve Force Manning
- New Concepts of Global Engagement
- Homeland Security
- Streamline DoD Processes
- Reorganize DoD and the USG to Deal with Pre-War Opportunities and Post-War Responsibilities



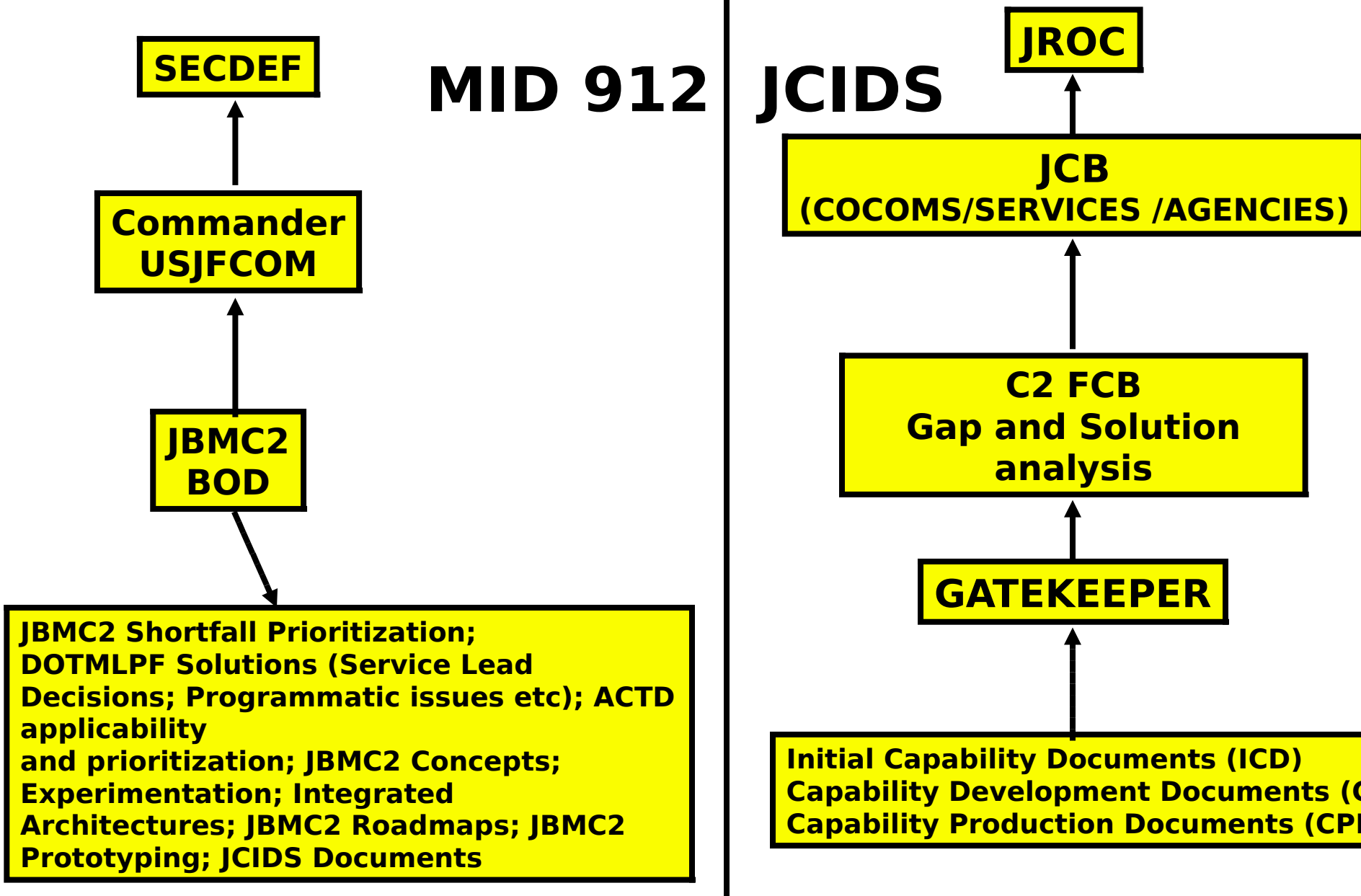
= JFCOM focus

= MID912 focus

Transformation is a top U.S. defense priority

MID912 Authorities vs C2 FCB

A set of responsibilities and authorities for capability & requirements mechanis


SECDEF
MID 912
JCIDS
JROC
Commander USJFCOM
JCB (COCOMS/SERVICES /AGENCIES)
JBMC2 BOD
C2 FCB Gap and Solution analysis
GATEKEEPER
JBMC2 Shortfall Prioritization; DOTMLPF Solutions (Service Lead Decisions; Programmatic issues etc); ACTD applicability and prioritization; JBMC2 Concepts; Experimentation; Integrated Architectures; JBMC2 Roadmaps; JBMC2 Prototyping; JCIDS Documents
Initial Capability Documents (ICD)
Capability Development Documents (C
Capability Production Documents (CPI

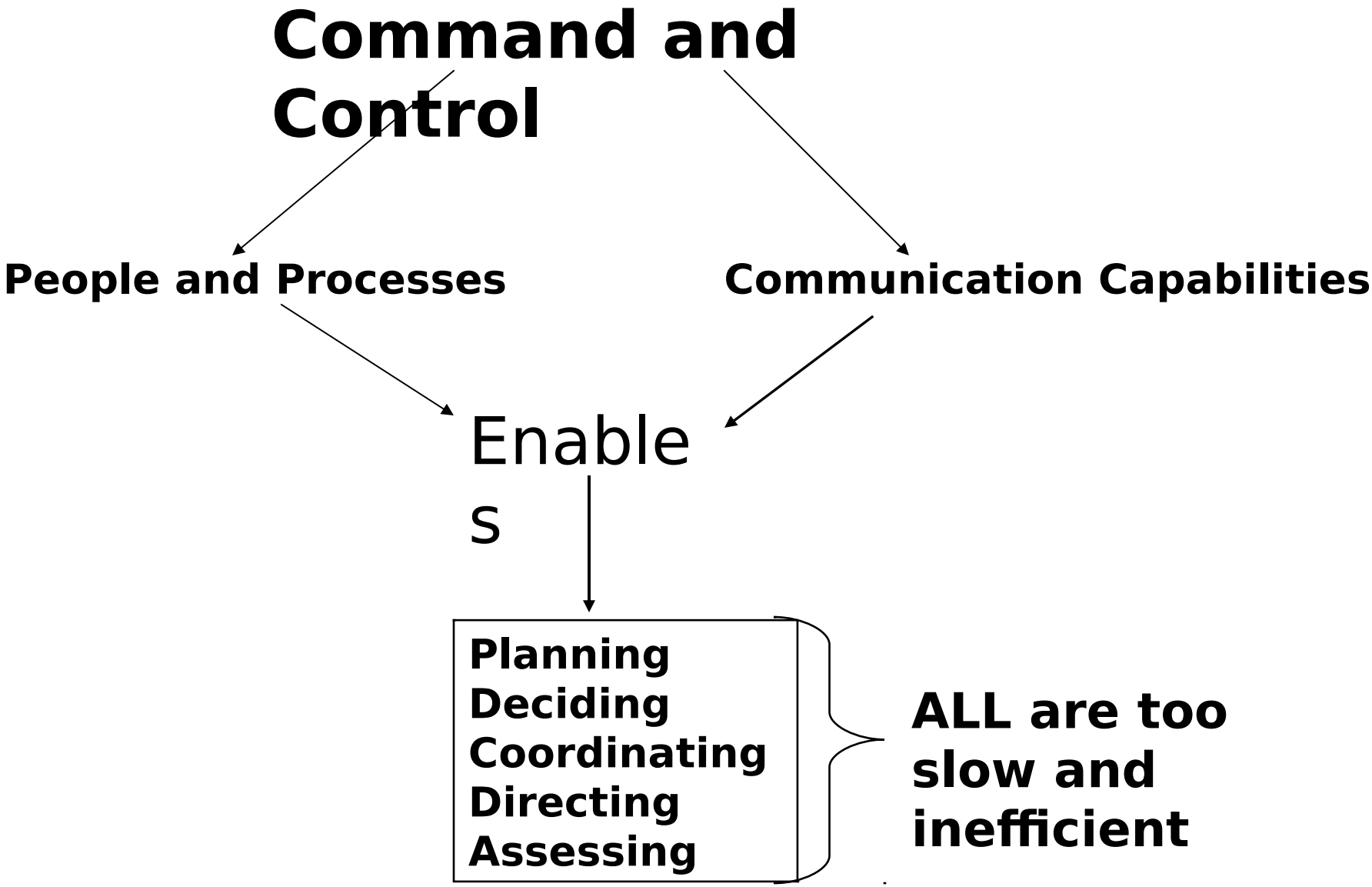
JBMC2 Roadmap

- **Within context of 3170/5000/MID 912**
- **Guide joint warfighter (JFCOM), net-centric vision (NII & I), and capability focused acquisition (AT&L, Joint Staff, and Services)**
- **Build on “the heart” of JBMC2 – FIOP consistent with GIG-NCES vision**
- **Provide a “direction vector” for key non-material and material “mosaic pieces”**
- **Develop Plan of Action with milestones from today’s legacy to the future**
- **Within broader framework, include specific key enablers**

Command & Control

The KEY
to
Joint Warfighting Capability

Unclassified



We have force elements today who are able to deploy, employ, create effects quicker than we can "command

JOINT BATTLE MANAGEMENT COMMAND AND CONTROL DEFINITION (DRAFT)

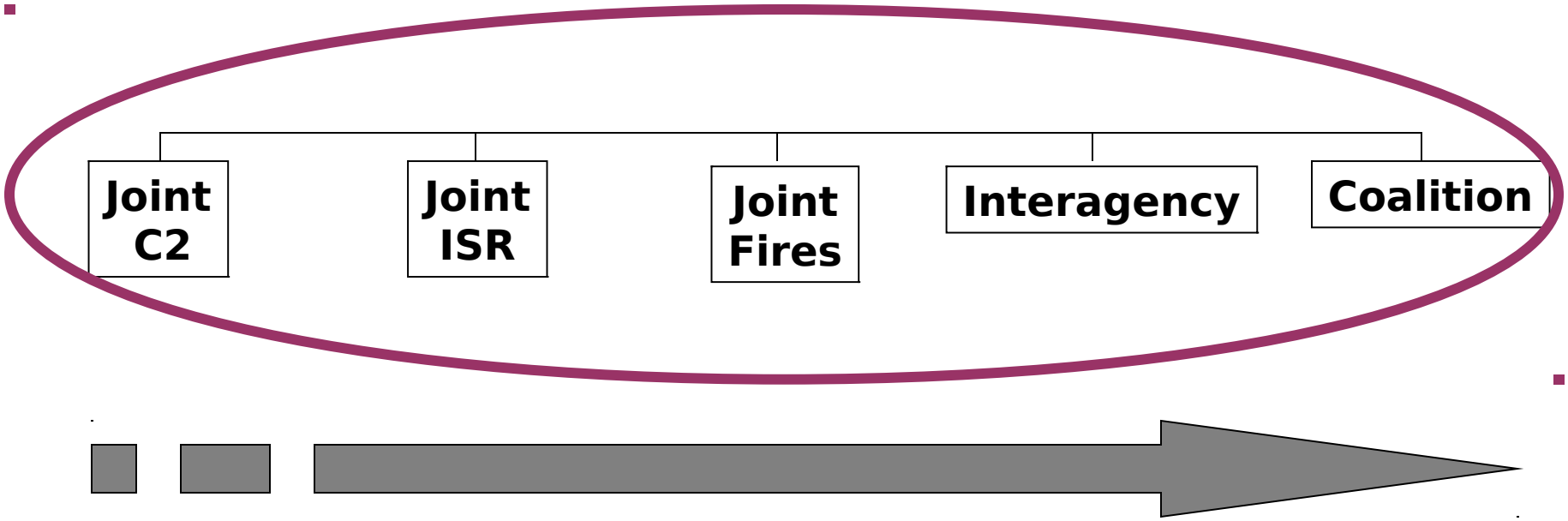
- **JBMC2 consists of the processes, architectures, systems, standards, and command and control operational concepts employed by the Joint Force Commander.**
  - **The Joint Force Commander executes joint operations by employing the entire array of JBMC2 capabilities during the planning, coordinating, directing, controlling, and assessing of joint force operations from interface with the strategic level through the tactical level.**

- **JBMC2 aims at providing an integrated, interoperable, and networked joint force that will:**
  - **Insure common shared situational awareness**
  - **Allow fused, precise and actionable intelligence**
  - **Support coherent distributed and dispersed operations, including forced entry into anti-access or area-denial environments**
  - **Ensure decision superiority enabling more agile, more lethal, and survivable joint operations**

Command and Control Landscape

(DRAFT)

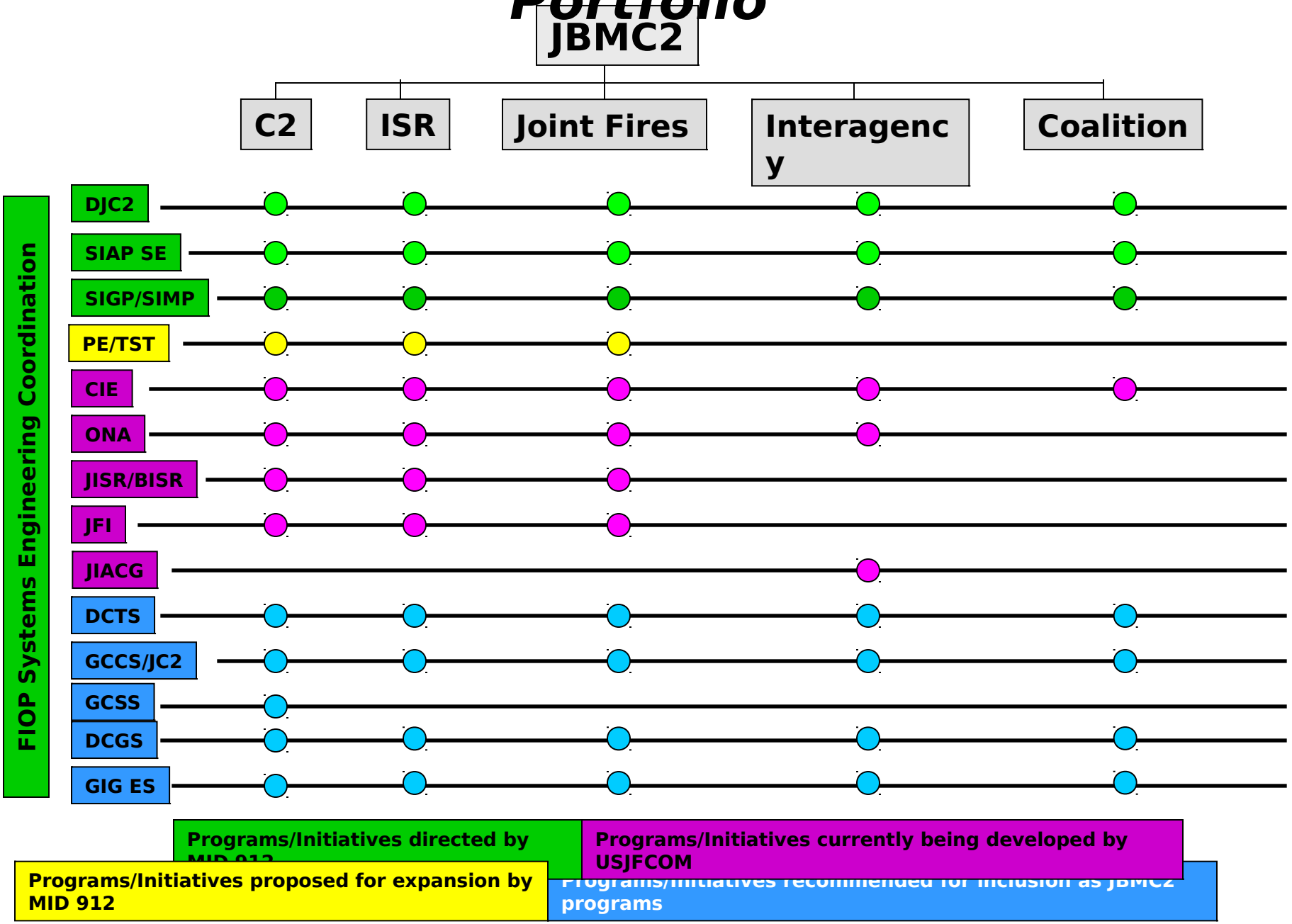
JBMC2 ARENA



Joint Battle Management Command and Control spans the continuum of Joint C2, Joint Intelligence (ISR), Joint Fires, Interagency, and Coalition

Fundamental Battlefield Process = The Kill Chain

JBMC2 Programs, Concepts & Initiatives Portfolio



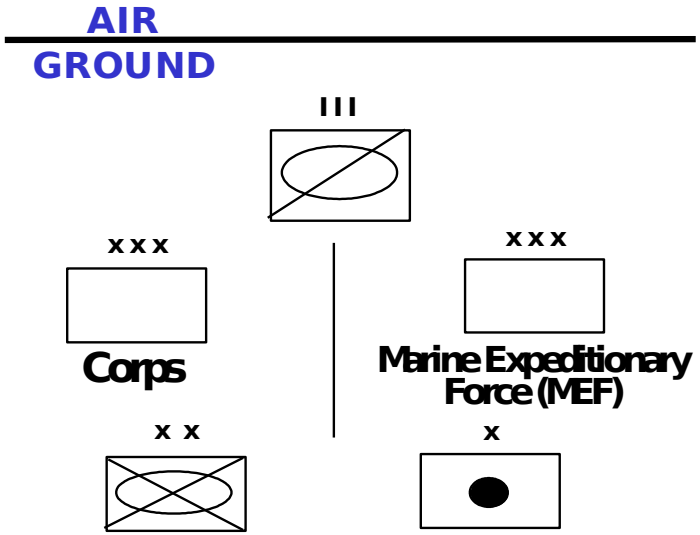
JBMC2 Drivers

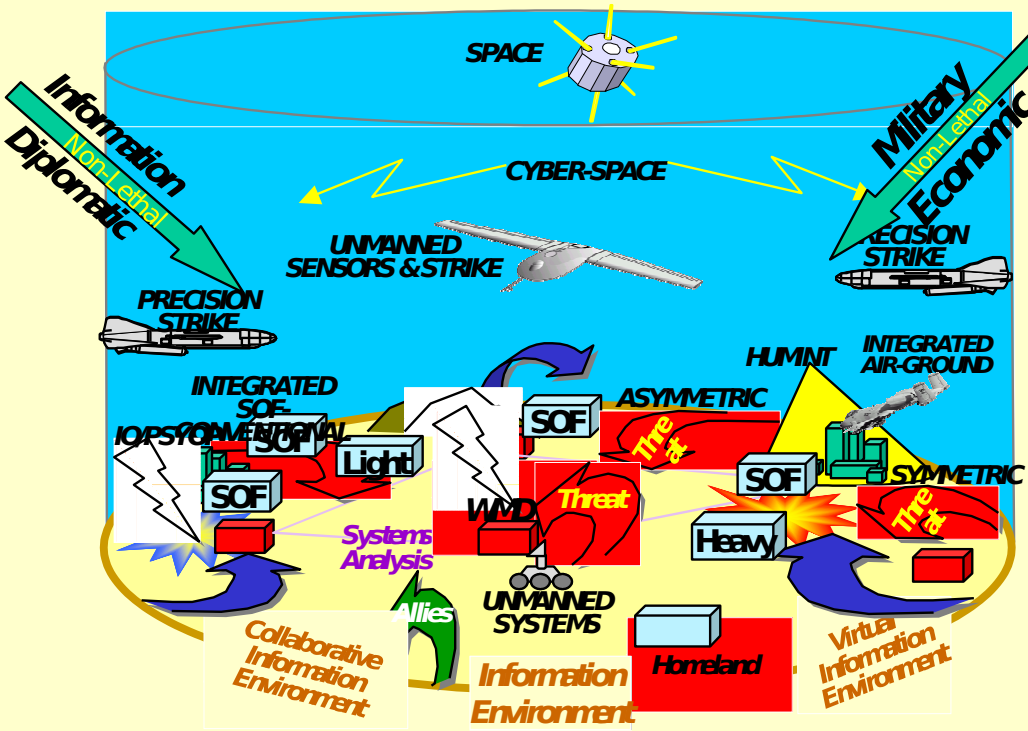
- **For any crisis, all Combatant Commanders must:**
  - **Execute command and control functions**
  - **Plan and execute using the same forces provided**
  - **Coordinate with the same national agencies**
  - **Rely on the same ISR forces/sources/agencies**
  - **Receive guidance from same national authorities**
  - **Perform crisis action planning**
  - **Perform assessment functions**
  - **Execute force deployment/redeployment**
  - **Employ the same national strategic capabilities**
  - **Execute Information Operations**
  - **Employ same SOF forces / “special” capabilities**
  - **Coordinate with / employ multinational forces**
  - **Rely on same supporting commands**
  - **Be ready to execute Joint C2 (Train)**

Common Training Environment Required to Support These Capabilities

From Battlefield to Battlespace

Conventional





Massed Forces — **Massed effects**

Deconflicted — **Integrated** — **Interdependent**

Linearly – Sequential space — **Simultaneous depth of**

Attrition warfare — **Rapid start/stop**

Military to Military power — **All elements of national**

Near Term Operational Arena

Legacy C2 will not meet this challenge

- Effects-Based Operations (EBO)
- Information Operations (IO)
- Force Projection
- Joint Tactical Actions (JTA)

Effects Based

Knowledge Centric

Thinking Differently

Fully Networked

Coherently Joint

- Operational Net Assessment (ONA)
- Joint Intelligence, Surveillance and Reconnaissance (JISR)
- Decision Superiority

- Collaborative Information Environment (CIE)

- Standing Joint Force Headquarters (SJFHQ)
- Joint Interagency Coordination Group (JIACG)

Commanders are moving out – building CIEs, altering C2 CONOPs, writing SOPs – attempting to solve shortfalls and already employing some concepts

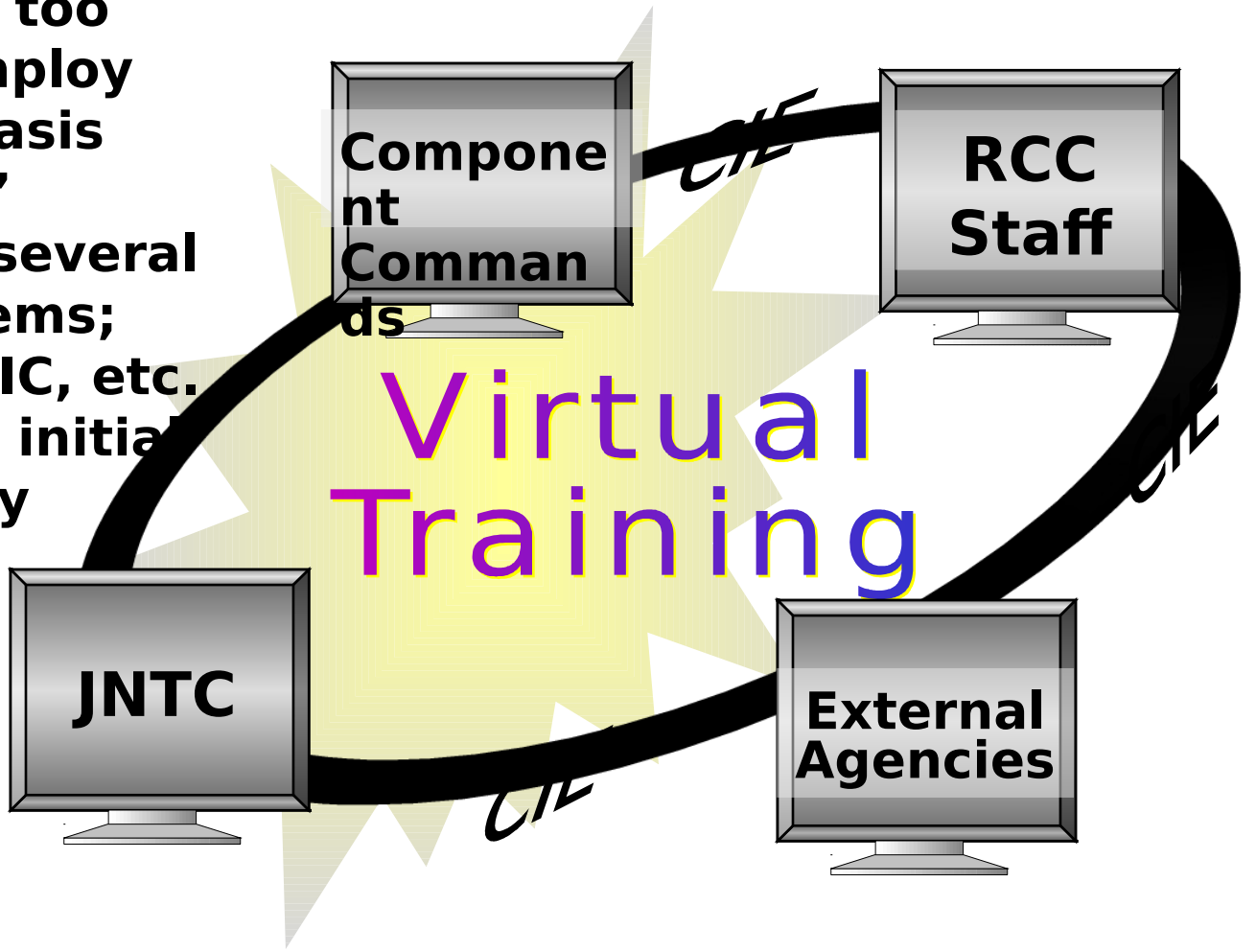
Joint Command and Control Issue
(Two Parts)

- **The need for JTF Readiness**
  - **Combat Units Train the Way They will Fight**
    - ***They are ready***
  - **JTF HQ's rarely train the Way They Will Fight**
  - **Service HQ's challenged to sustain readiness**

- **Technology is available now to enable more rapid, effective decision-making and execution**
  - **But, increases HQ personnel readiness requirement**
  - **Collaborative environment drives both C2 processes and organizational changes**
  - **Net-centric OPS require a new level of proficiency**

Proficiency Impacts Training Effectiver

- Modern HQ workstation is too complex to employ on a walk-in basis
- "Switchology" equivalent to several weapons systems; e.g. cockpit, CIC, etc.
- Requires both initia and proficiency training



owledge Management Training is Importa

Data Overload means *Information Camouflaged*

World War I:
30 wpm
Field Phone

World War II:
60 wpm
Radio

Vietnam:
100 wpm
SATCOM

Gulf War:
192,000 wpm
Networked Computers

War in 2010:
1.5 trillion wpm
Wideband Datalinks

We can transmit the entire Library of Congress each minute

wpm - words per minute

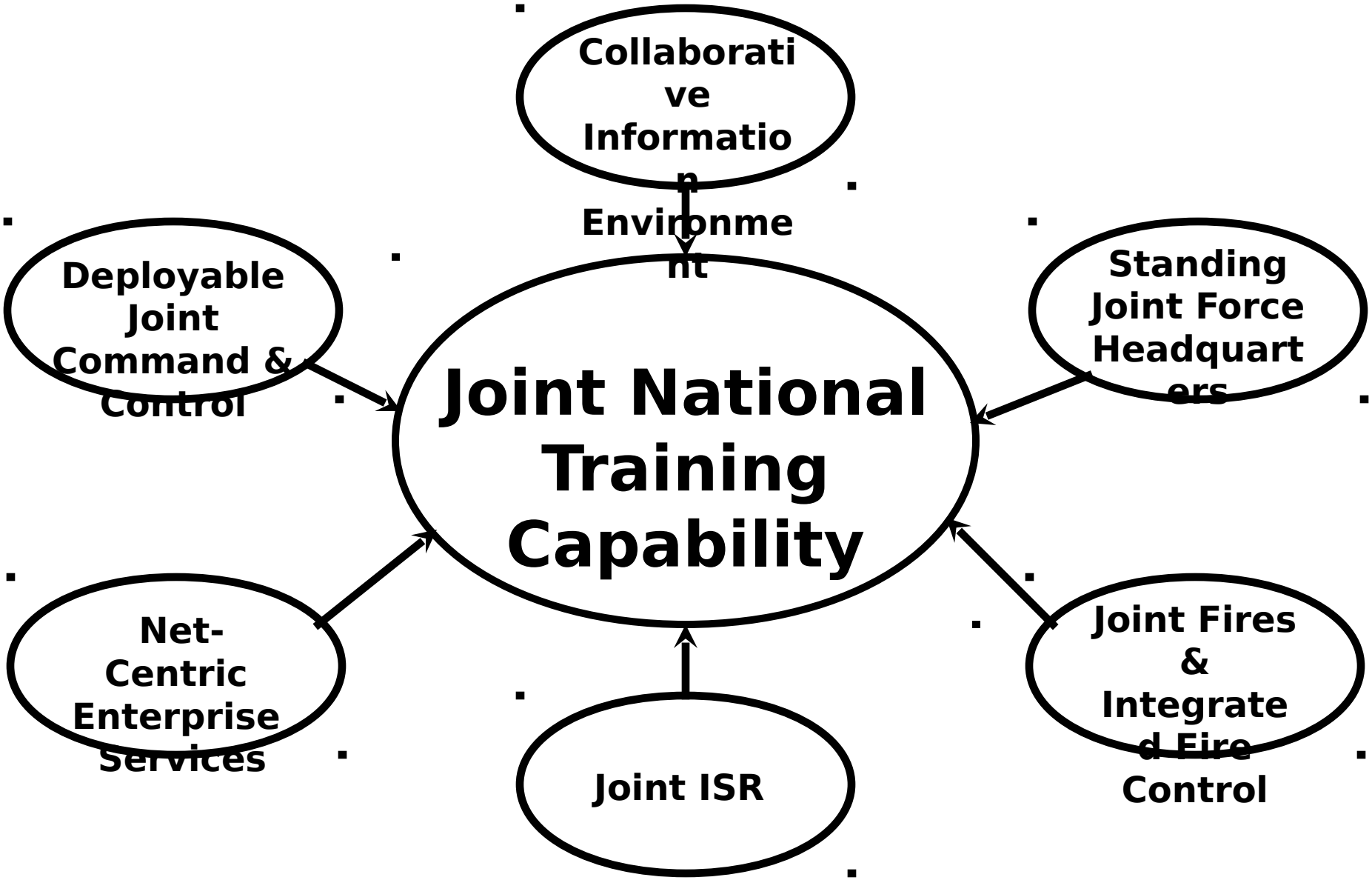
Challenges

- **Exploiting new ways of doing business enabled by technical capabilities**
  - **We tend to adapt new technologies to old ways of doing business – inability to see**
- **Knowledge Management**
  - **The Collaborative Information Environment**
- **The Science of Decision-making for leaders**
  - **Peaking human decision-making abilities**
- **Linking the Mental and Physical activities in an Information Age Environment**
  - **The Virtual and the Live**
- **Training**

TRANSFORMATION LEADERS

- Standing Joint Force Headquarters (SJFHQ)
- Deployable Joint Command and Control (DJC2)
- Collaborative Information Environment (CIE)
- Joint Fires Initiative
- Net-Centric Enterprise Services (NCES)
- Effects Based Operations (EBO)

Transformational C2 Training



USJFCOM - Additional Portfolio

- Joint Integration & Interoperability of Special Operations (JIISO)
  - Joint Test & Evaluation (JT&E) FY03 nomination
  - Sponsored by USSOCOM, USJFCOM, and USMC

- **Problem**: The joint force commander's integration and interoperability of SOF and other forces in today's battlespace is limited by existing JTTPs, systems and other DOTMLPF elements.

- **Scope**: Focus on improving the integration and interoperability of SOF and OTHER FORCES during planning for, and execution of, SPECIAL RECONNAISSANCE (SR) and DIRECT ACTION (DA) special operations missions.

- **Issues**: To what extent do *existing JTTPs and digital environments* support the integration and interoperability of SOF and other forces during planning for, and execution of, SR and DA?
  - To what extent do *changes to JTTPs* improve the integration and interoperability of SOF and other forces during planning for, and execution of, SR and DA?
  - To what extent do *alternative or emerging digital environments* improve the integration and interoperability of SOF and other forces during planning for, and execution of, SR and DA?

Other Forces - Conventional forces, other U.S. government agencies (OGA), coalition and combined forces. (Defined for this JT&E)

USJFCOM - Additional Portfolio

- USJFCOM provides oversight (coordinate, update, and maintain) of the following Capstone Requirements Documents (CRDs)
  - Theater Air Missile Defense (TAMD)
  - Combat ID (CID)
  - Close Air Support (CAS)
    - Lead for Joint CAS Executive Steering Committee (ESC)

- JC2 ORD
- Joint Blue Force Situational Awareness (JBFSA)
- Blue Force Tracker (BFT)
- JNTC
- OIF/GWOT Lessons Learned.
- DJC2

UNITED STATES
JOINT FORCES
COMMAND
USJFCOM

JBMC2 PROGRAMS

- Deployable Joint Command and Control System
- Single Integrated Air Picture - System Engineer
- Single Integrated Ground/Maritime Picture
- Precision Engagement/Time Sensitive Targeting
- Collaborative Information Environment
- Operational Net Assessment
- Joint Intelligence, Surveillance, Reconnaissance
- Joint Fires Initiative
- Joint Inter-agency Control Group
- Defense Collaborative Tool Set
- Global Command & Control System/Joint Command & Control
- Distributed Common Ground System
- Global Information Grid Enterprise Services

Anticipated Specific JBMC2 Roadmap Elements

- **Major milestones for implementation of key JBMC2 initiatives in MID 912**
- **Major milestones for convergence of key systems like DCGSs, FCS, etc;**
- **Milestones for phasing out some legacy systems by 2008**
- **Milestones for CONOPS/Architecture development for JBMC2**
- **Milestones for implementation of Net-Centric underpinning**
- **Milestones for all elements of DOT(M)LPF**